Identifying and Classifying an UST

RCRA Subtitle I Underground Storage Tanks

BACKGROUND: **Underground tanks that contain either petroleum or hazardous substances are subject to the Federal Underground Storage Tank (UST) regulations. These regulations, issued by the Environmental Protection Agency (EPA) under authority of Subtitle I of the Resource Conservation and Recovery Act (RCRA) [Section 9003 of the Hazardous and Solid Waste Amendments (HSWA) of 1984], establish standards for installation, operation, release detection, corrective action, repair, and closure of USTs and attached piping. The Department of Energy (DOE) is required by Section 9007 of RCRA to implement these regulations at DOE facilities with USTs. EPA is also authorizing individual states to implement their own UST regulatory programs in place of the Federal requirements. To receive this authorization, the state program must be "no less stringent" than the Federal requirements. In authorized states, the UST requirements may be more stringent than the Federal requirements. When a state program receives authorization, it becomes the "implementing authority" for the UST regulations. This means that the state agency has primary enforcement responsibility for its UST program. DOE facilities in these states must comply with state requirements that may be more stringent than federal regulations.**

The UST regulations differentiate between existing USTs and new USTs and between petroleum USTs and hazardous substance USTs. The regulations also exclude certain USTs and defer requirements for other USTs. Therefore, correct application of the UST regulations requires accurate identification and classification of regulated tanks and piping.

DOE prepared a guidance document, *Regulated Underground Storage Tanks* (DOE/EH-231/004/0191, June 1992), that describes the UST procedural requirements which regulate tanks and piping for both petroleum and hazardous substance USTs as well as USTs containing radioactive material regulated under the Atomic Energy Act of 1954 (42 U.S.C. 2011). This Information Brief supplements the UST guidance by identifying pertinent UST requirements and responding to critical questions concerning how to identify and classify USTs. It is part of a series of Information Briefs which address issues pertinent to specific categories of USTs.

STATUTES: **Resource Conservation and Recovery Act, Hazardous and Solid Waste Amendments of 1984, Subtitle I, Regulation of Underground Storage Tanks, Sects. 9001-9010, 42 U.S.C. 6991.**

REGULATIONS: **40 CFR 280. *Final rule:* 53 *FR* 37082, September 23, 1988 (revision of the original final rule, 50 *FR* 28742, July 15, 1985). *Amendments:* 53 *FR* 43370, October 26, 1988; 54 *FR* 5452, February 3, 1989; 54 *FR* 47081, November 9, 1989; 55 *FR* 17753, April 27, 1990; 55 *FR* 18567, May 2, 1990; 55 *FR* 23738, June 12, 1990; 55 *FR* 46025, October 31, 1990; 56 *FR* 26, January 2, 1991; 56 *FR* 38344, August 13, 1991; 56 *FR* 66373, December 23, 1991. *Corrections:* 53 *FR* 51274, December 21, 1988.**

REFERENCES:

1. *Regulated Underground Storage Tanks*, DOE/EH-231/004/0191, June 1992.

2. *Musts for USTs*, EPA/530/UST-88/008, September 1988.

What is an underground storage tank?

An UST is defined by Subtitle I as any tank or combination of tanks (including connected underground pipes) that is used to contain an accumulation of regulated substances, the volume of which (including the volume of connected underground pipes) is 10% or more beneath the surface of the ground. (40 CFR 280.12)

What is connected piping?

Connected piping means all buried piping, including valves, elbows, joints, flanges, and flexible connectors, attached to tank systems through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them. (40 CFR 280.12)

Who Must Comply with the Regulations?

The regulations hold owners and operators responsible for compliance. An UST owner is:

- any person who owns an UST system on November 8, 1984, or who brought the system into use after that date and
- in the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned an UST immediately before the discontinuation of its use.

An operator is any person in control of or having responsibility for the daily operation of the UST system. (40 CFR 280.12)

What are the major categories of USTs according to Subtitle I?

RCRA Subtitle I gave EPA the authority to distinguish between types (storing petroleum or hazardous substances), classes (excluded, deferred, or fully regulated), and age.

UST TYPES

How are tanks classified by their contents?

There are two broad categories of USTs: petroleum USTs and hazardous substance USTs. Petroleum USTs contain petroleum or a mixture of petroleum with *de minimis* quantities of other regulated substances. These systems include tanks containing motor fuel, jet fuel, distillate fuel oil, residual fuel oil, lubricants, petroleum solvents, or used oil. Hazardous substance USTs contain either (1) hazardous substances as defined in Section 101 (14) of CERCLA (40 CFR 302.4), but not including any of the substances regulated as a hazardous waste under RCRA Subtitle C or (2) any mixture of such CERCLA-listed substances and petroleum that is not a petroleum UST system. (40 CFR 280.12)

What steps should be taken to determine whether a tank system contains a regulated substance under Subtitle I?

The following steps should be taken:

- First, determine if the substance belongs to one of the seven general categories of regulated petroleum substances (i.e., motor fuel, jet fuel, distillate fuel oil, residual fuel oil, lubricants, petroleum solvents, and used oil).
- Second, determine whether the stored material is included within the "production process and physical properties" description for petroleum products (i.e., petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through the processes of separation, conversion, upgrading, and finishing, or any fraction of crude oil that is liquid at 60°F and 14.7 lbs./in.^{2} absolute, standard temperature and pressure).
- Third, determine whether the substance is listed as a hazardous substance under Section 101(14) of CERCLA (see 40 CFR Table 302.4) and is not a hazardous waste under Subtitle C of RCRA.

If the substance meets any of these three criteria, then it is a regulated substance. (53 *FR* 37116, 40 CFR 280.12)

How are hazardous substance USTs regulated differently than petroleum USTs?

Hazardous substance USTs have more stringent release detection requirements (including secondary containment and interstitial monitoring) than petroleum USTs. All other technical requirements are the same for UST systems storing regulated substances. (53 *FR* 37116)

UST CLASSES

How can an underground tank that contains regulated substances be excluded from EPA's UST regulations?

There are two ways a tank can be excluded from the UST regulations. One way is for the tank to be excluded from the statutory definition of an UST (RCRA Section 9001 (1) (A - I). The other way is for the tank to be excluded from the applicability section of the regulations [40 CFR 280.10 (b)]. Changes in the statutory exclusions must be made by Congress, while changes in the regulatory exclusions may be made by EPA. For example, USTs used for storing heating oil for consumptive use on the premises were exempt by the statute, as were septic tanks and storm-water and waste-water collection systems. Tanks excluded from the regulations by EPA include hydraulic lift tanks and tanks that have a capacity of less than 110 gallons. The "Excluded USTs" Information Brief (EH-231-012b/0593) provides additional guidance in identifying and operating excluded USTs.

The definition of an UST includes underground piping connected to the tank. If an exempt tank is connected by piping to a regulated tank, how is the connected piping regulated under Subtitle I?

Section 9001(1) of RCRA states that an UST system includes the tank and all underground pipes connected to it, but also states that a statutorily excluded UST system includes all of the piping connected to it. EPA reconciled these conflicting statutory provisions by ruling that if an exempt tank is connected by piping to a regulated tank, half of the piping is allocated to each tank system. (53 *FR* 37114, 40 CFR 280.12)

What is a deferred UST?

A deferred UST refers to an UST for which EPA has deferred the Subpart B (design, construction, installation, and notification), Subpart C (general operations requirements), Subpart D (release detection), Subpart E (release reporting, investigation, and confirmation), and Subpart G (closure) regulations. Until EPA decides how to regulate these USTs fully, the only regulations that apply are Subpart A (Interim Prohibition) and Subpart F (release response and corrective action). Examples of deferred tanks include underground, field-constructed, bulk storage tanks, and UST systems that contain radioactive wastes. The "Deferred USTs" Information Brief (EH-231-12b/0493) provides guidance on identifying and operating deferred USTs.

How are deferred USTs regulated?

Deferred USTs are only subject to the Interim Prohibition (Subpart A, 40 CFR 280.11) and release response and corrective action regulations (Subpart E, 40 CFR 280.60-280.67).

How are UST systems that store fuel solely for use by emergency power generators regulated?

EPA has deferred Subpart D (release detection) requirements for these tanks because those requirements currently mandate frequent monitoring that may be unworkable. These are tanks often used to store diesel fuel as a source of backup power in unmanned, remote locations (for example, at telephone switching locations). The other Subtitle I requirements apply fully to these USTs. [53 *FR* 37113, 40 CFR 280.10 (d)]

Why did EPA defer UST systems containing radioactive material?

Tanks containing radioactive wastes and other radioactive materials at commercially licensed nuclear facilities are regulated under the Atomic Energy Act of 1954 (AEA) (42 U.S.C. 2011) and by the Nuclear Regulatory Commission (NRC). Radioactive wastes and

other radioactive materials at DOE facilities are regulated under the AEA by DOE Orders. EPA deferred these systems because it appears that they are already subject to stringent regulation. EPA, however, lacks complete information on whether these regulations fully cover all appropriate areas addressed under Subtitle I. EPA is gathering more information on these tanks to determine if the AEA regulations fully cover all appropriate areas. If EPA decides additional regulations for these tanks is necessary to protect human health and the environment, EPA may remove this deferral and issue more complete radioactive UST regulations.

Currently, USTs containing radioactive wastes and other radioactive materials are subject to the Interim Prohibition and the release response and corrective action provisions of Subtitle I. The Interim Prohibition [Section 9003 (g) of RCRA] states that after May 6, 1985, no person may install an underground storage tank unless the tank is protected from corrosion. This provision was included in the statute by Congress to prevent the installation of unprotected tanks during the period EPA developed the regulations.

Also, the release response and corrective action provisions (Subpart F) of the regulations describe applicable procedures for owners and operators of systems containing radioactive material. These procedures include the removal of regulated substance from the UST system, mitigation of fire and explosion hazards, removal of spilled product, completion of a site characterization, and additional soil and/or ground water remediation as required by the implementing agency. [53 *FR* 37111, 40 CFR 280.10 (c)(2)]

UST AGE

Does the age of an UST affect the way it is regulated?

Yes. EPA classifies tanks for which installation commenced on or before December 22, 1988, to be existing USTs. Any UST for which installation commenced after this date is a new tank system. All new tank systems must meet the requirements of Subparts B, C, and D before they can commence operation. (40 CFR 280.12)

When is installation considered to have commenced?

Installation is considered to have commenced if:

- the owner or operator has obtained all Federal, state, and local approvals or permits necessary to begin physical construction or installation, and if
- either a continuous on-site physical construction or installation program has begun or if
- the owner/operator has entered into contractual obligations (which cannot be canceled or modified without substantial loss) for physical construction at the site or installation of the tank system. (40 CFR 280.12)

How are new USTs regulated differently than existing USTs?

New USTs have stringent installation requirements that must be met before the UST may be used. Existing USTs must be upgraded to meet the requirements of Subparts B and C (for corrosion protection, overfill controls, and operating requirements) by December 22, 1998. To do this, they must either be replaced with tanks that meet these standards or upgraded in place. Upgrades must include overfill controls and corrosion control (an interior lining, cathodic protection, or another acceptable method of protecting the tank system from corrosion and structural failure). The release detection requirements for existing USTs are phased in on a schedule based on the age of the tank and should take effect no later than December 22, 1993. (40 CFR 280)

Questions of policy or questions requiring policy decisions will not be dealt with in EH-231 Information Briefs unless that policy has already been established through appropriate documentation. Please refer any questions concerning the subject material covered in this Information Brief to Jerry DiCerbo, EH-23, (202) S86-5047.